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FILE 'MEDLINE' ENTERED AT 06:52:27 ON 15 OCT 2003

FILE 'CAPLUS' ENTERED AT 06:52:27 ON 15 OCT 2003
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FILE 'SCISEARCH' ENTERED AT 06:52:27 ON 15 OCT 2003
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FILE 'AGRICOLA' ENTERED AT 06:52:27 ON 15 OCT 2003

=> s (cartilage oligomeric matrix protein) or (thrombospondin-5)
L1        1091 (CARTILAGE OLIGOMERIC MATRIX PROTEIN) OR (THROMBOSPONDIN-5)

=> s l1 (p) human
L2         292 L1 (P) HUMAN

=> s hCOMP (p) protein
L3           0 HCOMP (P) PROTEIN

=> s purif? (p) l2
L4          35 PURIF? (P) L2

=> s elisa (p) kit
L5        8262 ELISA (P) KIT

=> s l5 (p) l2
L6           0 L5 (P) L2

=> s (biological matrix) or ( treated cartilage) or (bone matrix) or collagen or hyaluronan or (fi
L7      515658 (BIOLOGICAL MATRIX) OR (TREATED CARTILAGE) OR (BONE MATRIX) OR
               COLLAGEN OR HYALURONAN OR (FIBRIN GEL) OR (CARBON FIBER) OR
               (POLYLACTIC ACID)

=> s l7 (p) l2
L8          59 L7 (P) L2

=> s l8 (p) purif?
L9           5 L8 (P) PURIF?

=> duplicate remove l9
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L9
L10          1 DUPLICATE REMOVE L9 (4 DUPLICATES REMOVED)

=> d l10 1 ibib abs

L10  ANSWER 1 OF 1     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:   2003324085     IN-PROCESS
DOCUMENT NUMBER:    22737940   PubMed ID: 12853037
TITLE:              Cleavage of cartilage oligomeric matrix protein
                    (thrombospondin-5) by matrix metalloproteinases and a
                    disintegrin and metalloproteinase with thrombospondin
                    motifs.
AUTHOR:             Dickinson Sally C; Vankemmelbeke Mireille N; Buttle David
                    J; Rosenberg Krisztina; Heinegard Dick; Hollander Anthony P
CORPORATE SOURCE:   Academic Rheumatology, University of Bristol, Avon
                    Orthopaedic Centre, Southmead Hospital, BS10 5NB, Bristol,
                    UK.
SOURCE:             MATRIX BIOLOGY, (2003 May) 22 (3) 267-78.
                    Journal code: 9432592. ISSN: 0945-053X.
PUB. COUNTRY:       Germany: Germany, Federal Republic of
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE:         Entered STN: 20030711
                    Last Updated on STN: 20030808
AB     ***Cartilage***     ***oligomeric***     ***matrix***     ***protein***
```

(COMP) is a pentameric glycoprotein present in cartilage, tendon and ligament. Fragments of the molecule are present in the disease cartilage, synovial fluid and serum of patients with knee injuries, osteoarthritis and rheumatoid arthritis. Although COMP is a substrate for several matrix metalloproteinases (MMPs), the enzymes responsible for COMP degradation in vivo have yet to be identified. In this study we utilised well-established bovine cartilage culture models to examine IL-1alpha-stimulated COMP proteolysis in the presence and absence of MMP inhibitors. COMP was released from bovine nasal cartilage, in response to IL-1alpha, at an intermediate time between proteoglycans and type II ***collagen*** , when soluble MMP levels in the culture medium were undetectable. The major fragment of COMP released following IL-1alpha-stimulation migrated with an apparent molecular mass of approximately 110 kDa (Fragment-110) and co-migrated with both the major fragment present in ***human*** arthritic synovial fluid samples and the product of COMP cleavage by ***purified*** MMP-9. However, the broad-spectrum MMP and ADAM inhibitor BB94 only partially inhibited the formation of Fragment-110 and failed to inhibit COMP release significantly. Therefore the results of these studies indicate a role for proteinases other than MMPs in the degradation of COMP in bovine cartilage. It was further demonstrated that ***purified*** COMP was cleaved by ADAMTS-4, but not ADAMTS-1 or -5, to yield a fragment which co-migrated with Fragment-110. Therefore this is the first demonstration of COMP as a substrate for ADAMTS-4, although it remains to be determined whether this enzyme plays a role in COMP degradation in vivo.

=> d his

(FILE 'HOME' ENTERED AT 06:52:05 ON 15 OCT 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 06:52:27 ON 15 OCT 2003

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L1          1091 S (CARTILAGE OLIGOMERIC MATRIX PROTEIN) OR (THROMBOSPONDIN-5)
L2           292 S L1 (P) HUMAN
L3             0 S HCOMP (P) PROTEIN
L4            35 S PURIF? (P) L2
L5          8262 S ELISA (P) KIT
L6             0 S L5 (P) L2
L7        515658 S (BIOLOGICAL MATRIX) OR ( TREATED CARTILAGE) OR (BONE MATRIX)
L8            59 S L7 (P) L2
L9             5 S L8 (P) PURIF?
L10            1 DUPLICATE REMOVE L9 (4 DUPLICATES REMOVED)

=> s l4 (p) l7
L11            5 L4 (P) L7

=> duplicate remove l11
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L11
L12            1 DUPLICATE REMOVE L11 (4 DUPLICATES REMOVED)

=> s l12 not l10
L13            0 L12 NOT L10

=> duplicate remove l4
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L4
L14            8 DUPLICATE REMOVE L4 (27 DUPLICATES REMOVED)

=> s l14 not l12
L15            7 L14 NOT L12

=> d l15 1-7 ibib abs

L15  ANSWER 1 OF 7     MEDLINE on STN
ACCESSION NUMBER:    2003349529      MEDLINE
DOCUMENT NUMBER:     22743555    PubMed ID: 12861146
TITLE:               Differential gene expression in pubococcygeus muscle from
                     patients with pelvic organ prolapse.
AUTHOR:              Visco Anthony G; Yuan Lingwen
CORPORATE SOURCE:    Division of Urogynecology and Reconstructive Pelvic
                     Surgery, University of North Carolina at Chapel Hill Chapel
                     Hill, NC 27710, USA.. anthony_visco@med.unc.edu
CONTRACT NUMBER:     R01-HD-38680 (NICHD)
```

SOURCE: AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY, (2003 Jul) 189 (1) 102-11.
Journal code: 0370476. ISSN: 0002-9378.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200308
ENTRY DATE: Entered STN: 20030729
Last Updated on STN: 20030808
Entered Medline: 20030807

AB OBJECTIVE: This study was undertaken to compare differential gene expression in the pubococcygeus muscle in patients with pelvic organ prolapse and controls. STUDY DESIGN: We performed microarray analysis on individual pubococcygeus muscle biopsy specimens from five patients with stage III or IV pelvic organ prolapse and five control subjects without prolapse. This study received full Institutional Review Board approval. Total RNA was extracted, ***purified*** , and probed on the ***Human*** Genome U95A Array for each individual sample. RNA from patients and controls was not pooled. For microarray analysis, 7 microg of total RNA was used to synthesize complementary DNA that was then biotinylated. Arrays were hybridized for 16 hours in the GeneChip Fluidics Station 400 and were washed and scanned with the Hewlett-Packard GeneArray Scanner. Affymetrix GeneChip 5.0 software was used for scanning and data analysis. RESULTS: Of the 12626 total genes compared, 257 genes were more than 2-fold underexpressed, 20 genes were more than 5-fold underexpressed, and 3 genes were more than 10-fold underexpressed in patients with pelvic organ prolapse compared with control subjects. Myosin-binding protein H was 24.7 times underexpressed in patients with prolapse (normalized signal intensity [NSI]: 0.46 [0.2-0.6]) compared with controls (NSI: 11.4 [0.2-31.3]). Skeletal muscle myosin heavy polypeptide 3 was 17.4 times underexpressed in patients with prolapse (NSI: 0.85 [0.7-0.9]) compared with controls (NSI: 14.8 [1.5-38.3]). Of the 12,626 genes compared, 479 genes were more than 2-fold overexpressed, 18 genes were more than 5-fold overexpressed, and 2 genes were more than 10-fold overexpressed in patients with pelvic organ prolapse compared with controls. Many of these overexpressed genes were related to actin and myosin proteins. Smooth muscle myosin heavy chain was 11.8 times overexpressed in patients (NSI: 5.21 [0.25-22.71]) compared with controls (NSI 0.44 [0.11-0.71]). Myosin light-chain kinase was 5.8 times overexpressed in patients (NSI: 7.9 [0.5-36.1]) compared with controls (NSI: 1.37 [0.38-1.8]). Extracellular matrix proteins were also differentially regulated. ***Cartilage*** ***oligomeric*** ***matrix*** ***protein*** precursor was found to be 6.0 times underexpressed, whereas tenascin-C (hexabrachion) was 5.1 times overexpressed in prolapse patients. CONCLUSION: These data suggest that the differences between patients with advanced pelvic organ prolapse and controls may be related to differential gene expression of structural proteins that are related to actin and myosin as well as extracellular matrix proteins in the pubococcygeus muscle. Studies are ongoing to confirm these findings and to further characterize the role of these genes in prolapse.

L15 ANSWER 2 OF 7 MEDLINE on STN
ACCESSION NUMBER: 2001685066 MEDLINE
DOCUMENT NUMBER: 21588233 PubMed ID: 11590138
TITLE: Disulfide connectivity of recombinant C-terminal region of human thrombospondin 2.
AUTHOR: Misenheimer T M; Hahr A J; Harms A C; Annis D S; Mosher D F
CORPORATE SOURCE: Department of Medicine and the Biotechnology Center, University of Wisconsin, Madison, Wisconsin 53706, USA.. tmmisenh@facstaff.wisc.edu
CONTRACT NUMBER: HL54462 (NHLBI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Dec 7) 276 (49) 45882-7.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20011204
Last Updated on STN: 20030105
Entered Medline: 20020110

AB The thrombospondin (TSP) family of extracellular glycoproteins consists of five members in vertebrates, TSP1 to -4 and TSP5/ ***cartilage*** ***oligomeric*** ***matrix*** ***protein*** , and a single member

in Drosophila. TSPs are modular multimeric proteins. The C-terminal end of a monomer consists of 3-6 EGF-like modules; seven tandem 2[redacted] 36-, or 38-residue aspartate-rich, Ca(2+)-binding repeats; and an approximately 230-residue C-terminal sequence. The Ca(2+)-binding repeats and C-terminal sequence are spaced almost exactly the same in different TSPs and share many blocks of identical residues. We studied the C-terminal portion of ***human*** TSP2 from the third EGF-like module through the end of the protein (E3CaG2). E3CaG2, CaG2 lacking the EGF module, and Ca2 composed of only the Ca(2+)-binding repeats were expressed using recombinant baculoviruses and ***purified*** from conditioned media of insect cells. As previously described for intact TSP1, E3CaG2 bound Ca(2+) in a cooperative manner as assessed by equilibrium dialysis, and its circular dichroism spectrum was sensitive to the presence of Ca(2+). Mass spectrometry of the recombinant proteins digested with endoproteinase Asp-N revealed that disulfide pairing of the 18 cysteines in the Ca(2+)-binding repeats and C-terminal sequence is sequential, i.e. a 1-2, 3-4, 5-6, etc., pattern.

L15 ANSWER 3 OF 7 MEDLINE on STN
ACCESSION NUMBER: 1999275245 MEDLINE
DOCUMENT NUMBER: 99275245 PubMed ID: 10343777
TITLE: Production of cartilage oligomeric matrix protein (COMP) by cultured human dermal and synovial fibroblasts.
AUTHOR: Dodge G R; Hawkins D; Boesler E; Sakai L; Jimenez S A
CORPORATE SOURCE: Department of Medicine, Thomas Jefferson University, Philadelphia, PA 19107, USA.
CONTRACT NUMBER: AR-39740 (NIAMS)
AR-42417 (NIAMS)
SOURCE: OSTEOARTHRITIS AND CARTILAGE, (1998 Nov) 6 (6) 435-40. Journal code: 9305697. ISSN: 1063-4584.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY DATE: Entered STN: 19990628
Last Updated on STN: 19990628
Entered Medline: 19990614

AB OBJECTIVE: ***Cartilage*** ***oligomeric*** ***matrix*** ***protein*** (COMP) is a large disulfide-linked pentameric protein. Each of its five subunits is approximately 100,000 Da in molecular weight. COMP was originally identified and characterized in cartilage and it has been considered a marker of cartilage metabolism because it is currently thought not to be present in other joint tissues, except for tendon. To confirm the tissue specificity of COMP expression we examined cultured ***human*** dermal fibroblasts, ***human*** foreskin fibroblasts, and normal ***human*** synovial cells for the synthesis of COMP in culture. METHOD: Normal synovial cells and normal ***human*** dermal foreskin fibroblasts were isolated from the corresponding tissues by sequential enzymatic digestions and cultured in media containing 10% fetal bovine serum until confluent. During the final 24 h of culture, the cells were labeled with 35S-methionine and 35S-cysteine in serum- and cysteine/methionine-free medium. The newly synthesized COMP molecules were immunoprecipitated from the culture media with a COMP-specific polyclonal antiserum, or with monoclonal antibodies or affinity-***purified*** COMP antibodies. The immunoprecipitated COMP was analyzed by electrophoresis in 5.5% polyacrylamide gels. For other experiments, synovial cells cultured from the synovium of patients with rheumatoid arthritis (RA) and osteoarthritis (OA) were similarly examined. RESULTS: A comparison of the amounts of COMP produced by each cell type (corrected for the DNA content) revealed that synovial cells produced > or = 9 times more COMP than chondrocytes or dermal fibroblasts. COMP could be easily detected by immunoprecipitation in all cell types. Electrophoretic analysis revealed a distinct band with an apparent MW of 115-120 kDa in samples from each of the three cell types, regardless of the antibody used. COMP expression in cultures of synoviocytes derived from OA and RA patients showed that OA and RA synovial cells produced similar amounts of monomeric COMP of identical size to those COMP monomers produced by normal synovial cells. The addition of TGF-beta to these cultures resulted in an increase in COMP production in normal, OA and RA synovial cells (45, 116 and 115% respectively). CONCLUSION: These studies demonstrate that substantial amounts of COMP are produced by several mesenchymal cells including synoviocytes and dermal fibroblasts. These findings raise important concerns regarding the utility of measurements of COMP levels in serum or in synovial fluid as markers of articular cartilage degradation because of the likelihood that a substantial proportion of COMP or COMP fragments present in serum or synovial fluid

may be produced by cells other than articular chondrocytes.

L15 ANSWER 4 OF 7 MEDLINE on STN
ACCESSION NUMBER: 1998066562 MEDLINE
DOCUMENT NUMBER: 98066562 PubMed ID: 9402858
TITLE: Small fragments of cartilage oligomeric matrix protein in synovial fluid and serum as markers for cartilage degradation.
AUTHOR: Neidhart M; Hauser N; Paulsson M; DiCesare P E; Michel B A; Hauselmann H J
CORPORATE SOURCE: Department of Rheumatology, University Hospital Zurich, Switzerland.
SOURCE: BRITISH JOURNAL OF RHEUMATOLOGY, (1997 Nov) 36 (11) 1151-60.
Journal code: 8302415. ISSN: 0263-7103.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199801
ENTRY DATE: Entered STN: 19980129
Last Updated on STN: 19990129
Entered Medline: 19980109

AB We determined the tissue distribution of ***cartilage*** ***oligomeric*** ***matrix*** ***protein*** (COMP) in man and evaluated COMP in synovial fluid (SF) and serum. COMP was ***purified*** from ***human*** articular cartilage. Polyclonal antibodies were used to detect COMP in tissue cryosections and protein extracts. COMP was determined quantitatively and qualitatively in SF and serum by competitive enzyme-linked immunosorbent assay and immunoblotting. Knee joint SF was taken from nine cadaveric and six living controls, 52 patients with osteoarthritis (OA), 85 patients with rheumatoid arthritis (RA) and 60 patients with other forms of inflammatory arthritis. The degradative potential of SF on native COMP was tested in vitro. The highest concentrations of COMP were measured in articular cartilage and meniscus, the lowest in rib and trachea. Compared with controls, the concentrations of COMP in SF and serum were elevated in 36 and 50% of the patients. A total of 84% of patients with RA and 60% of patients with other forms of inflammatory arthritis showed significant amounts of low-molecular-weight COMP fragments (50-70 kDa) in SF. In contrast, SF fragments were present in only 21% of the OA patients. Furthermore, 13% of SF taken from patients with RA or other forms of inflammatory arthritis were able to degrade COMP in vitro. Using inhibitors, the involvement of serine proteinases could be demonstrated in only 8% of the cases. Based on these results, the absolute levels of COMP in SF and serum, and its fragmentation pattern in SF, seem to be promising as markers of joint tissue metabolism.

L15 ANSWER 5 OF 7 MEDLINE on STN
ACCESSION NUMBER: 97400236 MEDLINE
DOCUMENT NUMBER: 97400236 PubMed ID: 9257730
TITLE: Expression of cartilage oligomeric matrix protein by human synovium.
AUTHOR: Di Cesare P E; Carlson C S; Stollerman E S; Chen F S; Leslie M; Perris R
CORPORATE SOURCE: Musculoskeletal Research Center, Hospital for Joint Diseases Orthopaedic Institute, New York, NY 10003, USA.. PEDiCesare@aol.com
CONTRACT NUMBER: RR08562 (NCRR)
SOURCE: FEBS LETTERS, (1997 Jul 21) 412 (1) 249-52.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199709
ENTRY DATE: Entered STN: 19970922
Last Updated on STN: 19990129
Entered Medline: 19970905

AB ***Human*** synovium was analyzed for the possible expression of ***cartilage*** ***oligomeric*** ***matrix*** ***protein*** (COMP). Immunostaining with polyclonal antiserum to COMP demonstrated positive staining within the synovial cells and immediately subjacent connective tissue, with less intense staining in the deeper connective tissue. Western blot analysis using either polyclonal or monoclonal antibodies to ***human*** COMP confirmed the presence of COMP by immunoreactive bands with the same molecular mass (approximately 110 kDa)

as ***purified*** articular cartilage COMP. PCR using oligonucleotides that span ***human*** COMP exons 7-13 revealed identical amplification products from cDNA prepared from either ***human*** chondrocytes or synovium. Northern blot analysis using a biotinylated-probe to ***human*** COMP, spanning exons 12-13, also reveal an identical hybridization product to either ***human*** chondrocyte or synovium total RNA. ***Human*** synovium should be considered as a potential tissue source of COMP in any investigation of biological markers of cartilage metabolism.

L15 ANSWER 6 OF 7 MEDLINE on STN
ACCESSION NUMBER: 97306314 MEDLINE
DOCUMENT NUMBER: 97306314 PubMed ID: 9162039
TITLE: Post-translational modifications in cartilage oligomeric matrix protein. Characterization of the N-linked oligosaccharides by matrix-assisted laser desorption ionization time-of-flight mass spectrometry.
AUTHOR: Zaia J; Boynton R E; McIntosh A; Marshak D R; Olsson H; Heinegard D; Barry F P
CORPORATE SOURCE: Osiris Therapeutics Inc., Baltimore, Maryland 21231, USA.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1997 May 30) 272 (22) 14120-6.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199706
ENTRY DATE: Entered STN: 19970716
Last Updated on STN: 19990129
Entered Medline: 19970627

AB Analysis of the carboxymethylated subunit of ***human*** ***cartilage*** ***oligomeric*** ***matrix*** ***protein*** (COMP) by matrix-assisted laser desorption time-of-flight mass spectrometry indicated a protonated molecular mass of 86949 +/- 149 Da, compared with 83547.0 Da calculated from the sequence. Treatment with N-glycanase caused a reduction in mass of 3571 +/- 219 Da, but there was no loss of mass after treatment with O-glycanase or neuraminidase. Peptides containing two putative sites of N-glycosylation were ***purified*** and characterized. Analysis of the masses of these after N-glycanase treatment indicated that one was substituted at Asn-101 with an oligosaccharide of mass 1847. 2 +/- 6.6 Da, and the other was unsubstituted at Asn-124. The remaining site of attachment, at Asn-721, was, therefore, also substituted with an oligosaccharide of mass 1724 +/- 226 Da. Analysis of the total monosaccharide content by chemical methods indicated that there were no additional oligosaccharide substituents. The MALDI-TOF mass spectra of COMP from bovine fetal and adult cartilage were compared, indicating a more heterogeneous pattern of substitution at Asn-101 in the fetal form. Since COMP is distributed throughout the pericellular and territorial environments in developing cartilage but occupies the interterritorial zone in mature cartilage, these changes in glycosylation may allow for different intermolecular interactions.

L15 ANSWER 7 OF 7 MEDLINE on STN
ACCESSION NUMBER: 95325938 MEDLINE
DOCUMENT NUMBER: 95325938 PubMed ID: 7602403
TITLE: Cartilage oligomeric matrix protein: isolation and characterization from human articular cartilage.
AUTHOR: DiCesare P E; Morgelin M; Carlson C S; Pasumarti S; Paulsson M
CORPORATE SOURCE: Cartilage and Bone Research Center, Hospital for Joint Diseases Orthopaedic Institute, New York, New York 10003, USA.
CONTRACT NUMBER: RR08562 (NCRR)
SOURCE: JOURNAL OF ORTHOPAEDIC RESEARCH, (1995 May) 13 (3) 422-8.
Journal code: 8404726. ISSN: 0736-0266.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199508
ENTRY DATE: Entered STN: 19950822
Last Updated on STN: 19990129
Entered Medline: 19950809

AB ***Cartilage*** ***oligomeric*** ***matrix*** ***protein*** was ***purified*** in a native form from normal adult ***human*** articular cartilage. The key steps in the ***purification*** scheme

were selective extraction with buffer containing EDTA, wheat germ agglutinin affinity chromatography, and removal of the related protein thrombospondin by heparin affinity chromatography. Particles of ***cartilage*** ***oligomeric*** ***matrix*** ***protein*** viewed by electron microscopy after rotary shadowing revealed structures similar to the prototype molecule ***purified*** from Swarm rat chondrosarcoma. The protein demonstrated a bouquet-like five-armed structure, with peripheral globular domains connected by thin flexible strands to a central assembly domain. Immunohistochemistry revealed age-dependent differences in the protein's distribution in cartilage. In normal ***human*** adult articular cartilage, there was a relatively uniform distribution throughout the interterritorial extracellular matrix, whereas in fetal articular cartilage, immunostaining was localized to the extracellular matrix directly adjacent to the chondrocytes. The isolation and characterization of ***human*** ***cartilage*** ***oligomeric*** ***matrix*** ***protein*** will facilitate its study in pathological conditions of ***human*** cartilage.

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(FILE 'HOME' ENTERED AT 06:52:05 ON 15 OCT 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 06:52:27 ON 15 OCT 2003

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L2           292 S L1 (P) HUMAN
L3             0 S HCOMP (P) PROTEIN
L4            35 S PURIF? (P) L2
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L7        515658 S (BIOLOGICAL MATRIX) OR ( TREATED CARTILAGE) OR (BONE MATRIX)
L8            59 S L7 (P) L2
L9             5 S L8 (P) PURIF?
L10            1 DUPLICATE REMOVE L9 (4 DUPLICATES REMOVED)
L11            5 S L4 (P) L7
L12            1 DUPLICATE REMOVE L11 (4 DUPLICATES REMOVED)
L13            0 S L12 NOT L10
L14            8 DUPLICATE REMOVE L4 (27 DUPLICATES REMOVED)
L15            7 S L14 NOT L12
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=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	57.68	57.89

STN INTERNATIONAL LOGOFF AT 06:59:43 ON 15 OCT 2003